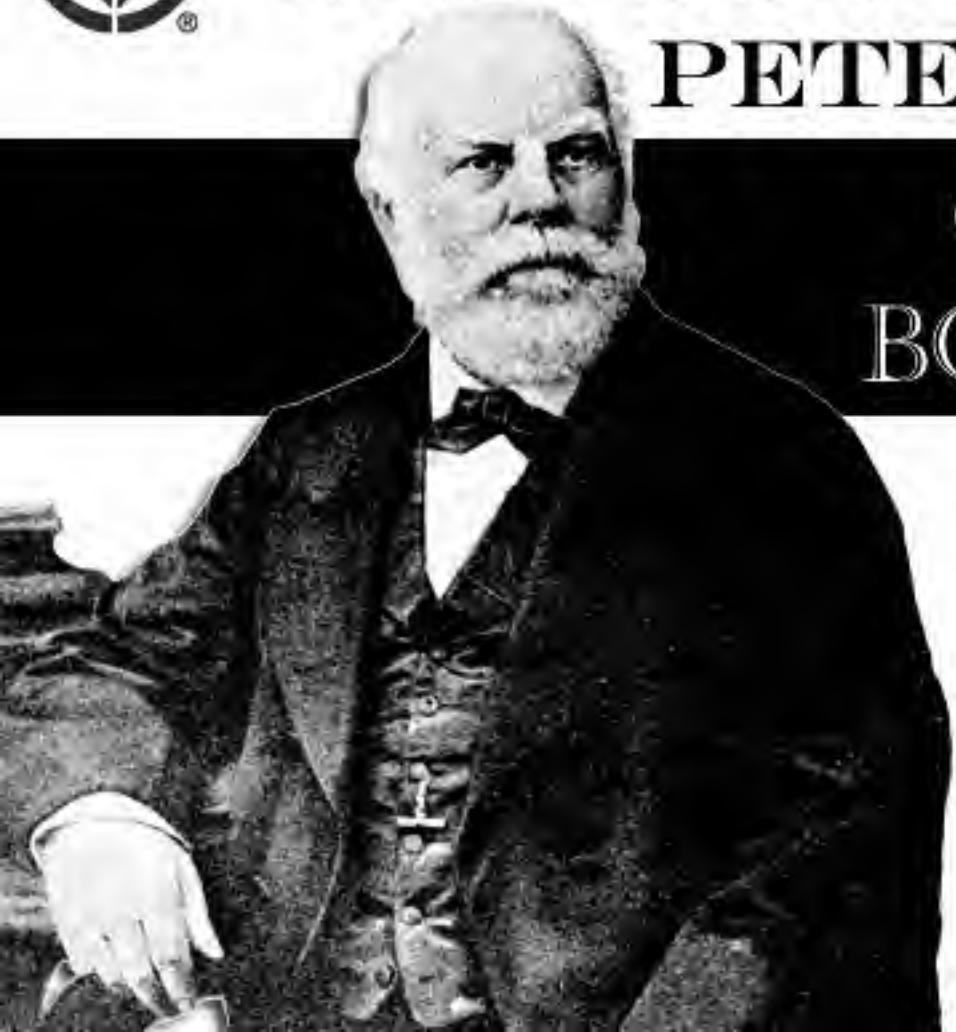




MISSOURI BOTANICAL GARDEN

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GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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Cereis from San Domingo, January 1871

2120

X 2 Cereis

the common hedge species of
"Jamaica" (Perry cit. May 19 1871) less branching than No 2
easily recognized by its woolly heads. flower later than
heads not woolly, was in flower in February.

X 2 *Cereis lanuginosus* Harv

grows with less, not so common,
not used for hedges, more branching, tips of branches
very woolly — flower later than No 1. only
remnants of old flowers found in February.



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~~St. Louis October 23. 1871~~

~~D^r G. Engelmann Esq~~

~~Sir~~

~~Pursuant to previous
notice the meeting of the
stockholders of the Independent
Press Association will be held
to morrow at 3 o'clock P.M.
Please fail not to attend.~~

~~Very truly~~

~~Yrs~~

~~Carl Daurge
of Gustavus Brown~~

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C Wright Pl. Cab. 2621 1860-64

Cereus Rogenii Haw. ^{HBKas Sept 1869}

var armatus Pfeiff.
ex Opisib. Cat

2121

Evidently a *Rhoconus*
with lateral Cephalium!

stem erect 8 ribbed
about 4 or 4½ out diam.

six ribs with rather large
areolar beard some
bulky hairy wool
and 10-15 fulvous-brown
spines 3-10" long
angular

Two ribs bear
(fewer spines?)

long (1½-2" long)
fulous wool very dusky
covering that part of the
plant, but ribs them-
selves not changed in

shape — — Areolas pretty close,
6-7 in 5" section.

Flower perfectly naked, too much
injurious to find out anything all it
does 7 out long — I think perhaps
4 a. wide —



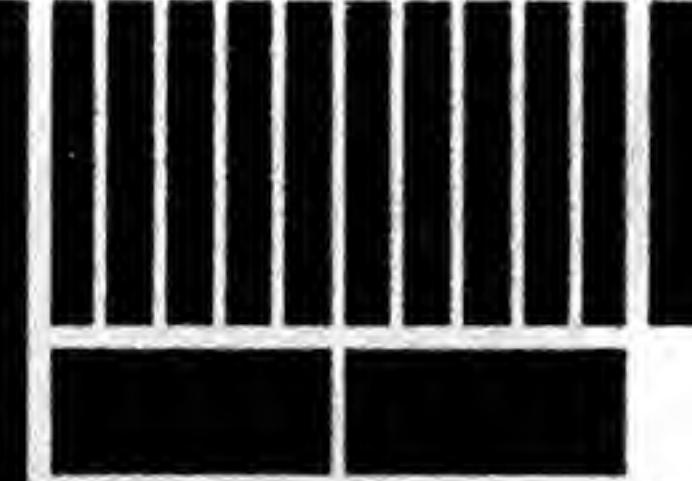
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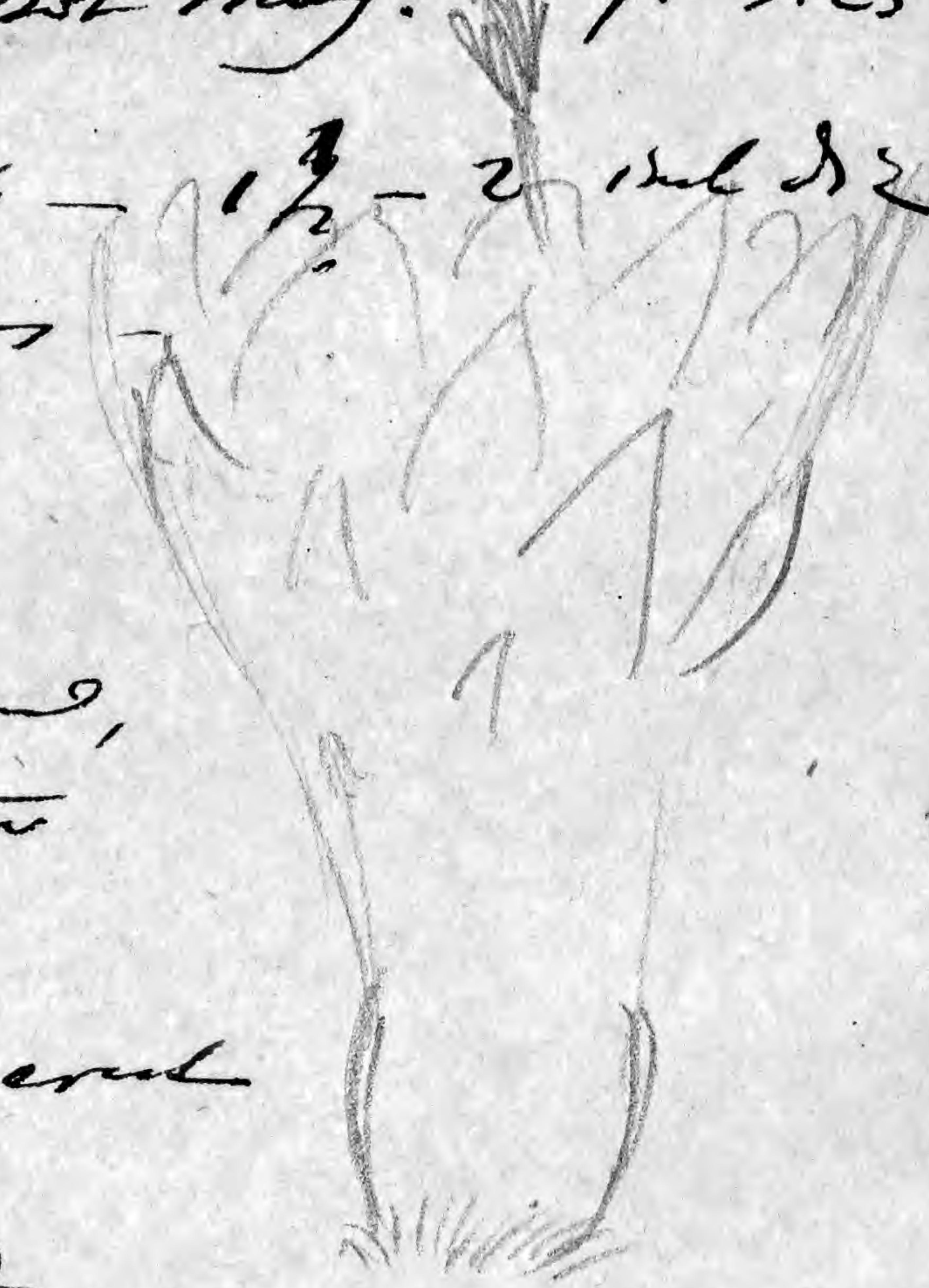
Kew Sept 1869

(1032)

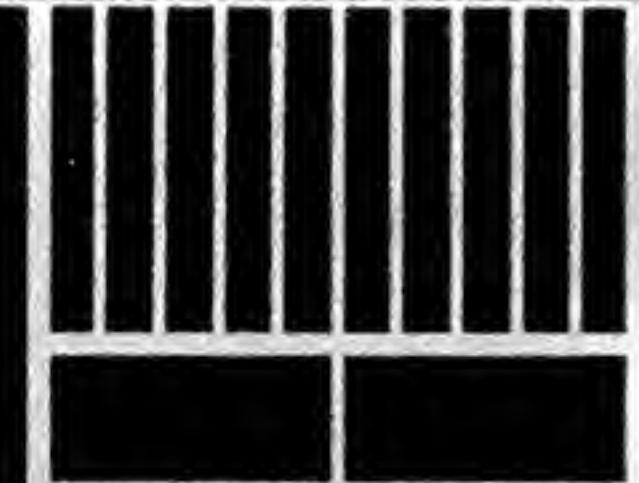
Cer. *Pilosella*. Haw., Bot Mag. 57. 3125

9-10 ang. on stiff lgt - 1 $\frac{3}{4}$ -2 in. tall
dry brown annual spars
fl: 6 long 4- wide -
rayed flower without any
scales - petals white roseolous,
short, (9 in the figure) shorter
than the very narrow sepals -
style exsert white, 7 or 8 cm
with rays of stigmas
The plant comes from Grenada

(apparently a *Pilosellus* flower)



2122



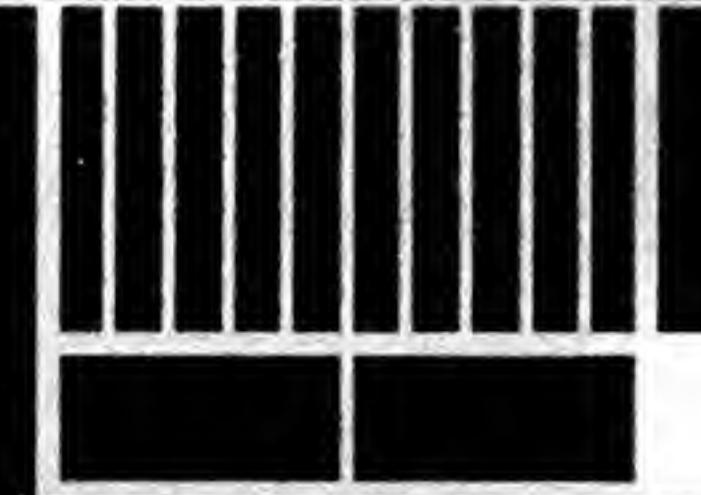
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44 [337] *Plants of the Rocky Mountains—Supplement III.*

—This is apparently the commonest species and of widest range west of the Rocky Mountains, extending from Russian America to Southern California. The name given by Bongard is much the earliest, but not a good one, being founded upon what, I believe, is only a northern form of Bentham's *C. hispida* (a later and scarcely more appropriate name), with a less developed corolla. The length of the galea appears to be subject to variation in this species, as in *C. pallida*, and the calyx-segments still more so. To the present species may be referred: *C. coccinea*, Lindl. Bot. Reg. t. 1136 (non Spreng.), which, as its calyx-segments are described as being dilated and retuse, Mr. Bentham should rather have referred to his *C. Douglasii*. *Euchroma angustifolia* and *E. Bradburii*, Nutt.! in Jour. Acad. Philad. 7, p. 44, 47 (1834), both hirsute forms with deeply cleft and narrow calyx-segments. *Castilleia hispida*, Benth. in Hook. Fl. Bor. Am. & in DC. Prodr., 10, p. 532. *C. Douglasii*, Benth. in DC. l. c. p. 530; the commoner form, with oblong or more dilated and slightly lobed or cleft calyx-segments. *C. desertorum*, Geyer in Hook. Kew Jour. Bot. 5, p. 258, which is just Nuttall's *E. angustifolia*, but with partly yellow bracts. *E. macrocalyx*, *E. villosa*, *E. laciniata*, and *E. viscosa*, Nutt. in herb. Acad. Philad.

C. PALLIDA, Kunth. Inferne sæpius glabra vel glabrata, caule versus apicem calycibusque villosis: folia inferiora sæpissime integra (e forma linearis ad ovato-lanceolatam), floralia vulgo pl. m. incisa vel laciniata et albido-colorata: calycis segmenta bifida seu biloba: galea aut breviuscula aut elongata.—The most northern species and extending round the world



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Plants of the Rocky Mountains—Supplement III. [336] 43

C. TENUIFLORA, Benth., Pl. Hartw. No. 191, as Bentham intimates, should probably include *C. longiflora*, Kunze, and *C. canescens*, Benth., (which is Gregg's No. 434, 610, and Coulter's No. 1354), all from Mexico.

C. ORIZABÆ I have not seen, unless Coulter's No. 1352 and 1353 belong to it.

C. FISSIFOLIA, Linn. f. (No. 835, coll. Venezuela. Fendler). To this Weddell refers all the five other South American species of this section, including even *C. integrifolia*, Linn. f.

C. LAXA, Gray in Bot. Mex. Bound., p. 119, of Arizona (coll. C. Wright, No. 1490), has a broader calyx and corolla than any of its allies, the former very thin-membranaceous, colored, and with obtuse teeth, the galea slightly falcate; the leaves thin and not dilated at the insertion.

§ 2. EUCHROMA (incl. *Callichroma*). Calyx antice et postice fissus, segmentis integris emarginatis vel bifidis.

I have nothing to say of the six Mexican and South American species in the Prodromus. The proper North American ones I understand as follows:

* *Radice annua vel bienni.*

← *Integrifoliæ.*

C. AFFINIS, Hook. & Arn. Folia linearis seu lanceolato-attenuata, floralia raro trifida: flores pl. m. pedicellati: calyx usque ad medium bifidus, segmentis angustis saepius bifidus vel emarginatus: galea elongata, falcata.



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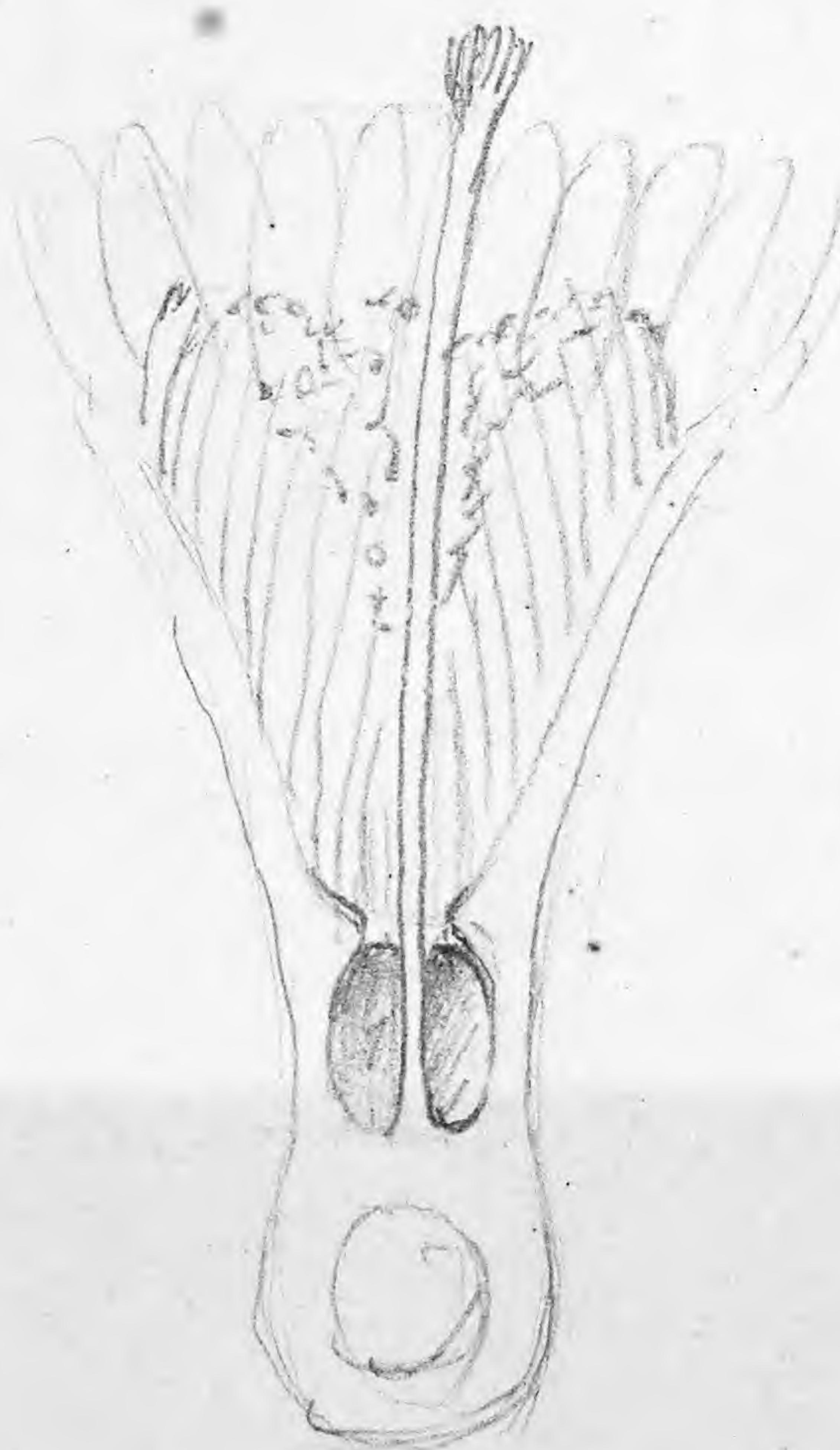
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Ceris Cartisi

May 25 1871

Sa Domingo 1871

Remnant of an old flower reconstructed



X10

2123

P. 14
st 22
N 10
S 14
Fl. 60 mm.



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Leitch & Corlies

C. D. ORIGINS

South West Corner Fifth and Market Streets

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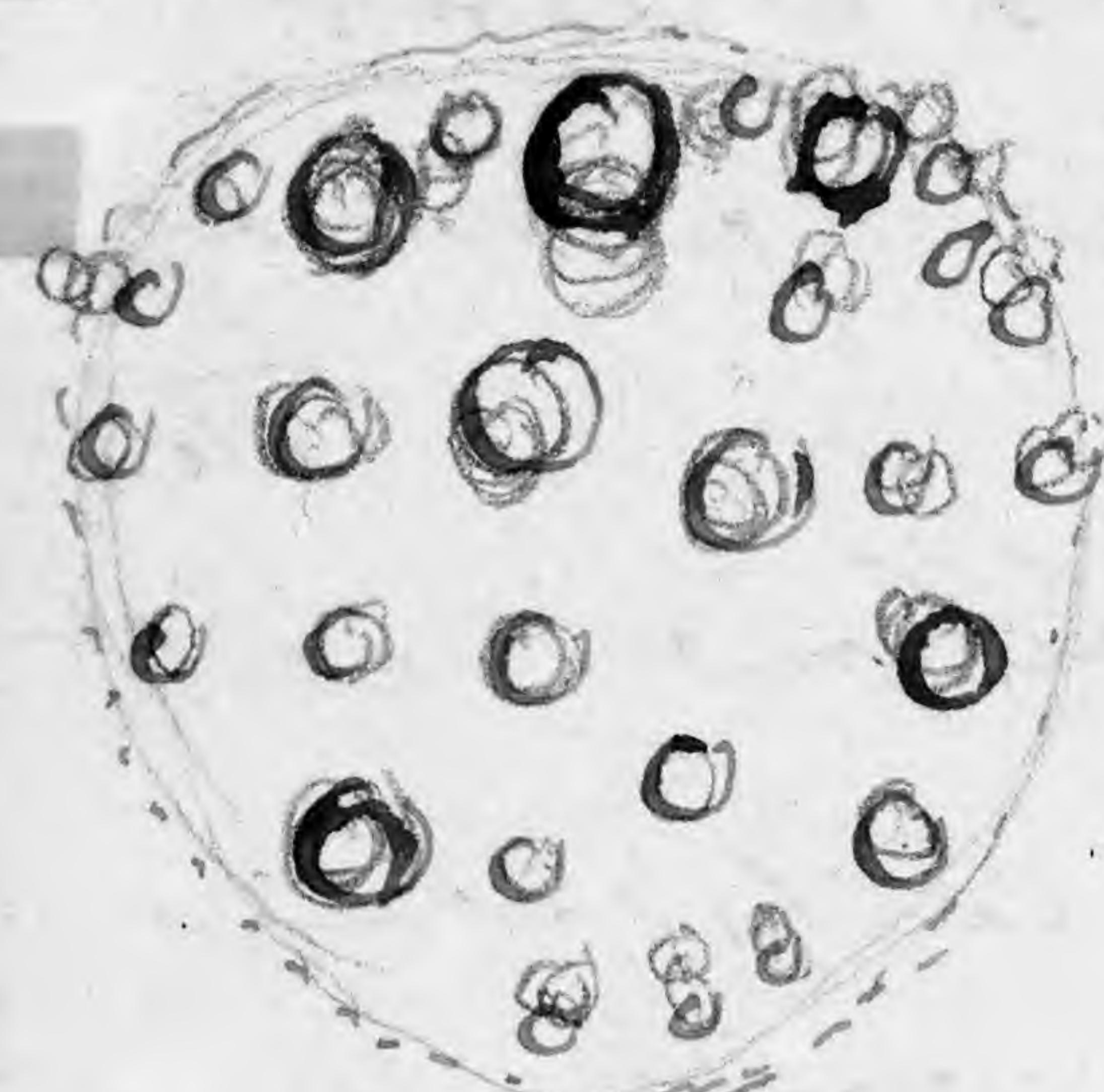
Ceratocactus

May 24 1871

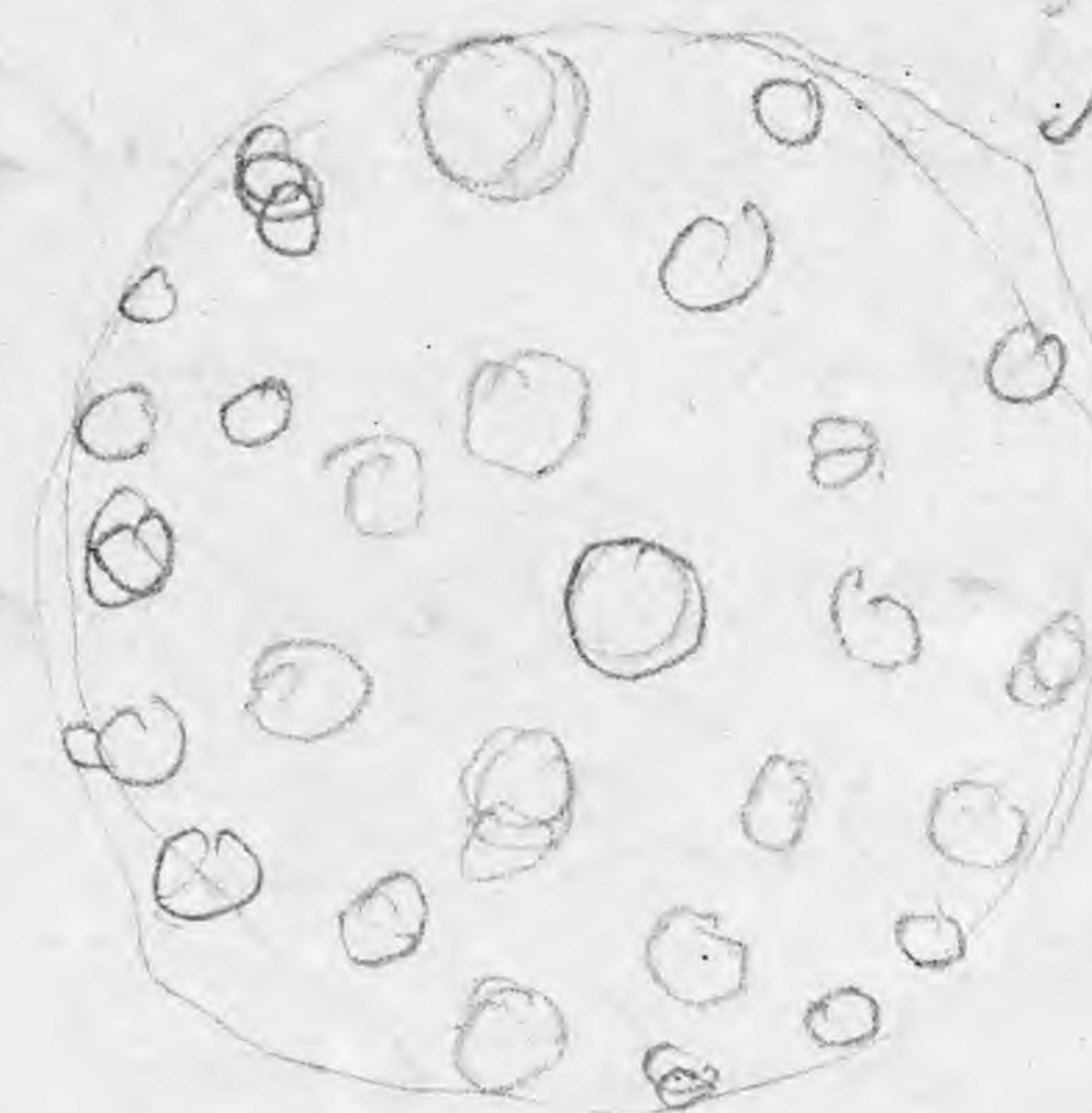
St Domingo

Perry & Wright

Feb 1871

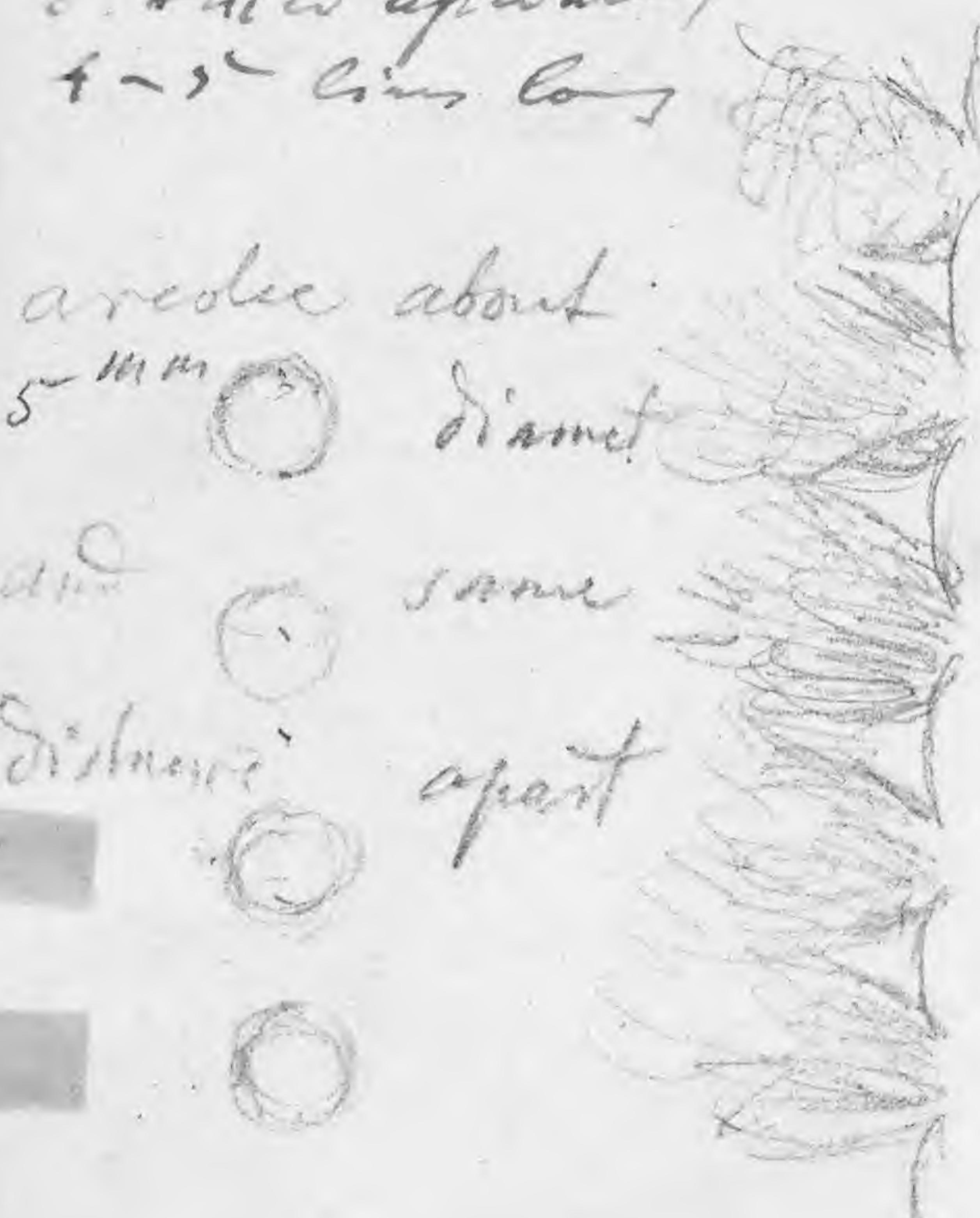


28 spines, stoutest
on upper margin
pointed upward
+ in line long



27 spines

woolly areole, circular
areole immersed, rib rounded,
spine between
largest spines pointed upward -
spines of upper and lower areole interlocked

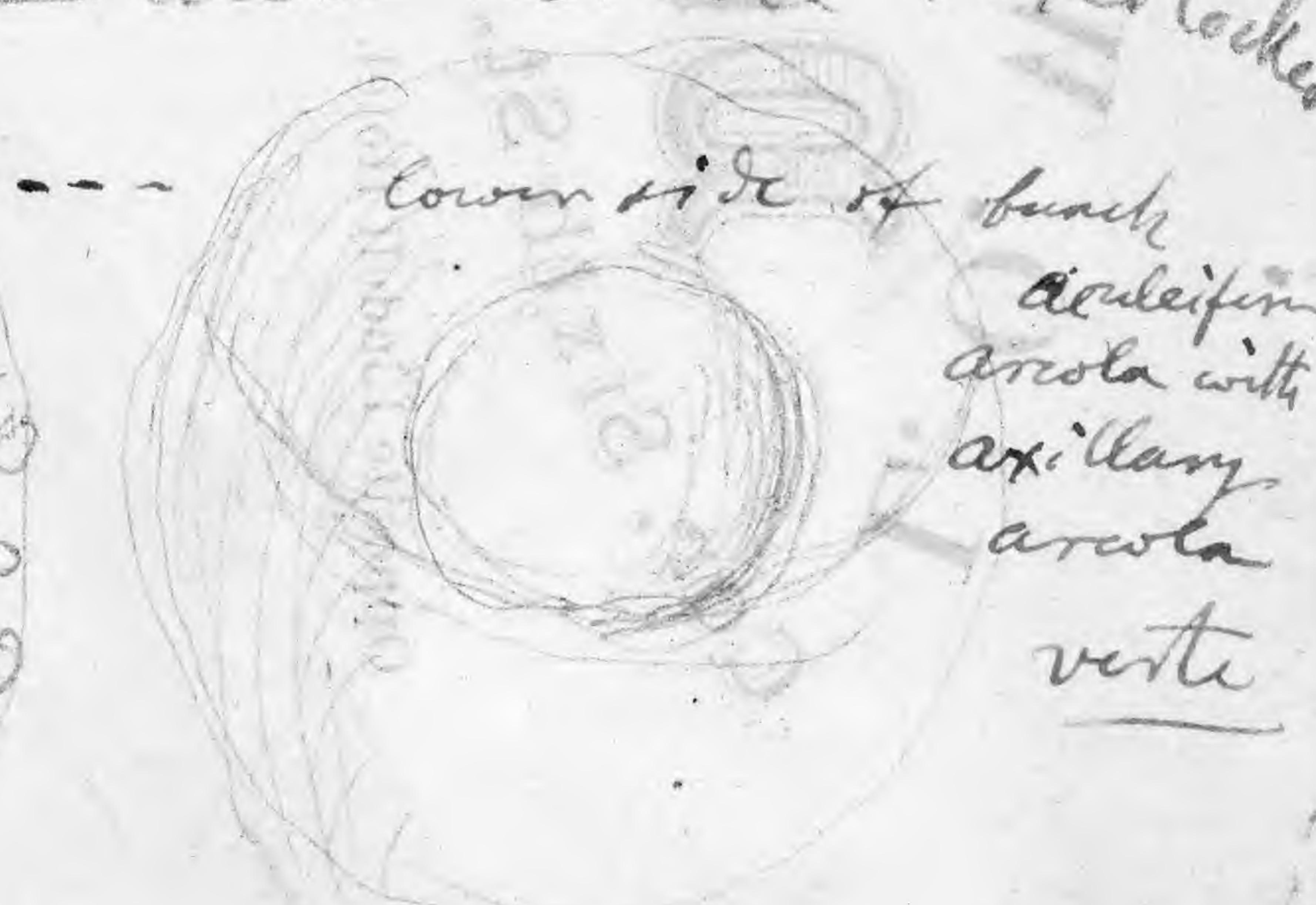
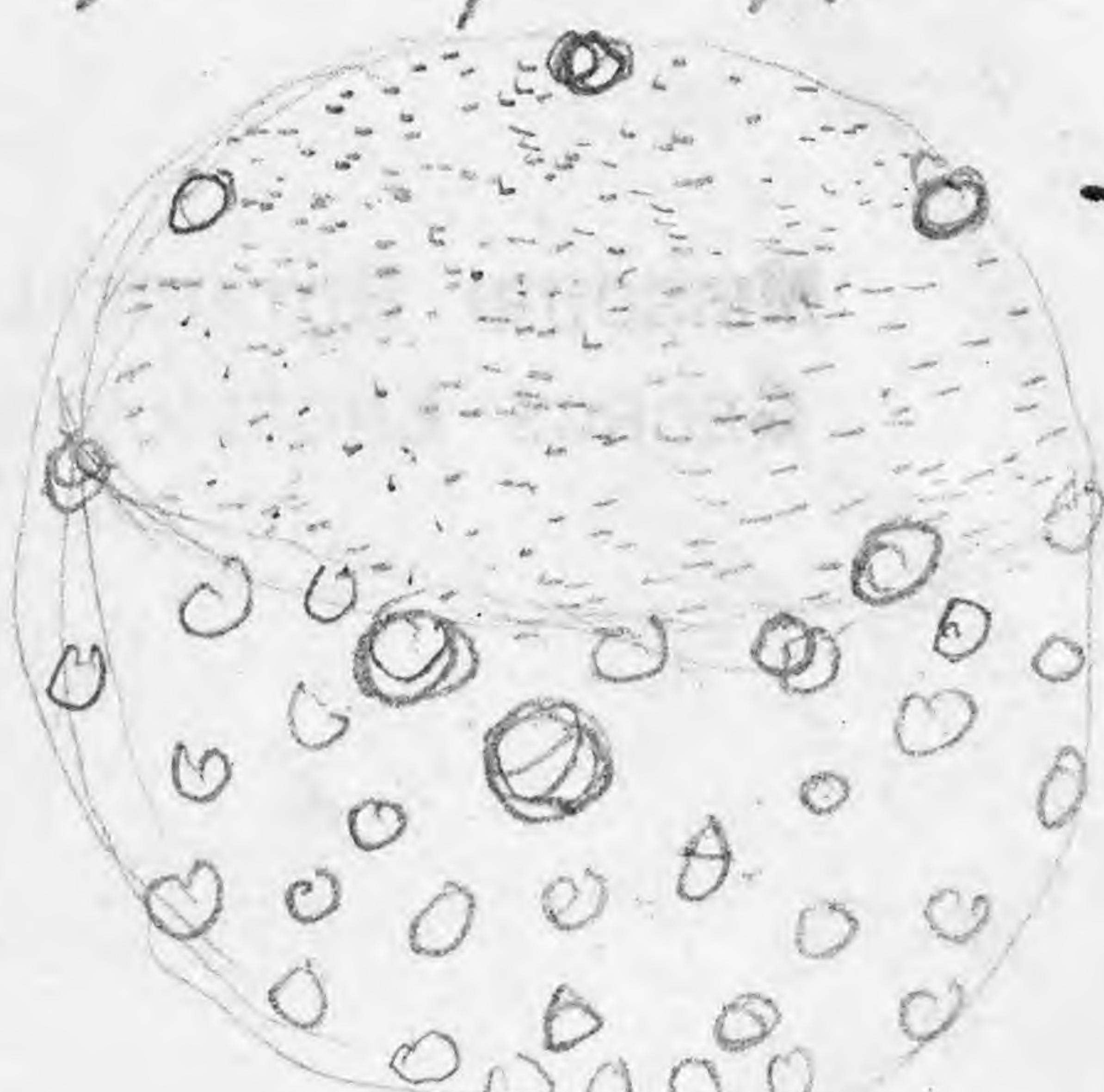


areole about

5 mm diam

some

distance apart



aculeifer
areola with
axillary
areola
verte



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L. O. WOODRUFF.

Drapery & Furnishing
Cor. Sixth St. & Washington Ave.

Opposite Lindell Hotel,

ST. LOUIS, MO.

a sterile arolla runs together
with the axillary arolla forming
one terminal arolla with the
staminodial part below with
the stamens and the staminular
upper very densely long woolly part
above, and a few (3 or 4) short
spikes at the upper edge

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woolly?
Cereus No 1 2125

height 25 ft (largest specimen)

Girth base 25 inches

Main branches 7

length of branch 5 ft

No of branches 20

length of joint 2 - 8 ft

Ribs 40 by 8 in

varying from 5 to 10

Spines 2 ft long

Spines 2 ft long



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Specimen in (box - tm)

top of large branch

in paper box -

section of lower branch
a young forming branch.
remains of old flower

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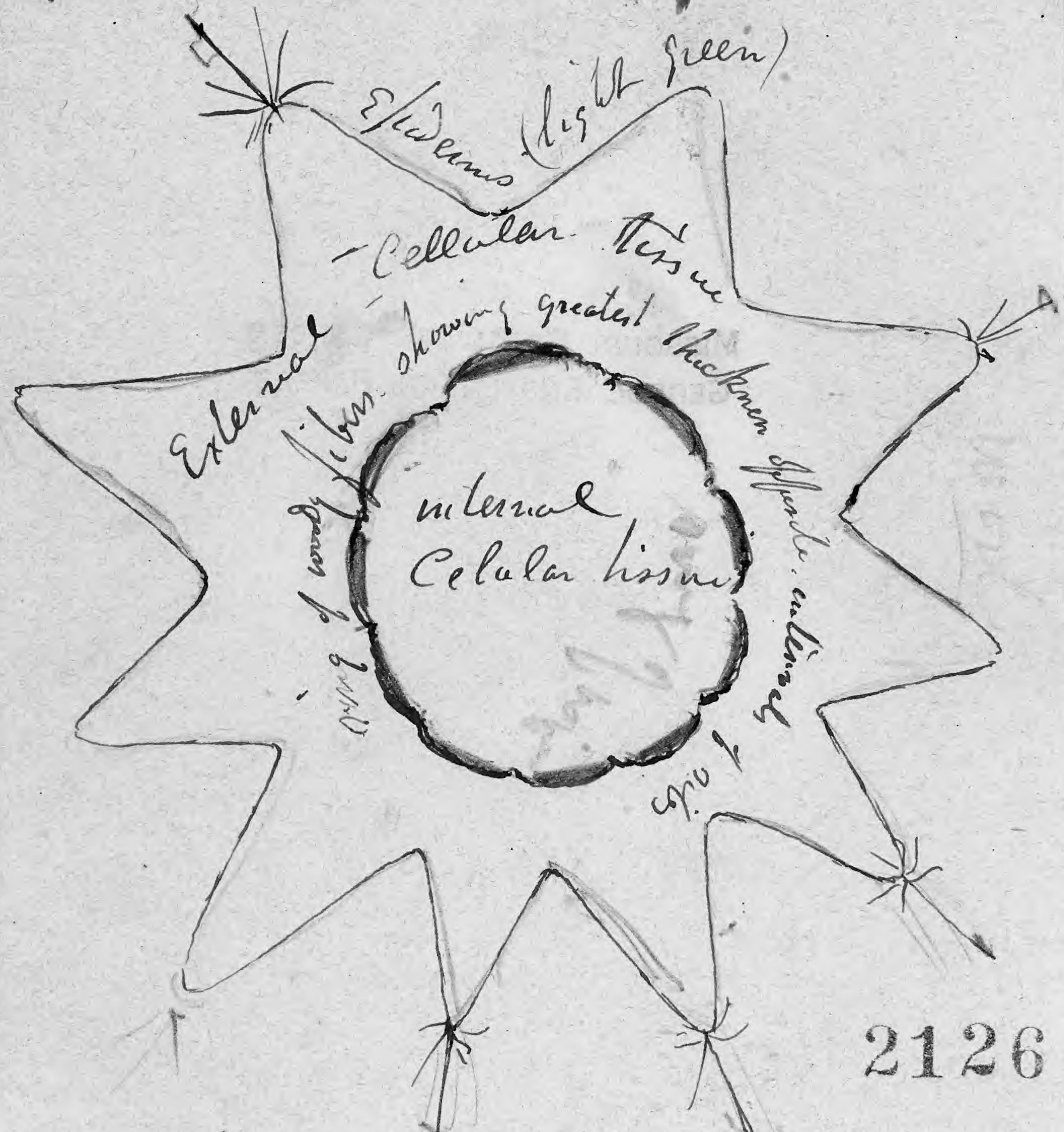
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No 1 Cereus



Section of branch
— (natural size)



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with *C. florosus* H. & A.

May 26 1871

(*Petros. Cestis*) Pfeiff. Linn. §1 apud Link & Otto in lit.
Piloservus — Sabine t. 8. 1849 p. 183 (and earlier — see Tournier)
Coronugonium Haw (Carter) to which probably *Noprin florosus* & Swartz's *bifid*
not the common hedgeplant of St Domingo (Cor.) 21. 27

but growing with it — branching, sometimes 25 feet
high, at least 25 inches over from — 5-10 mts, using
8 mts. A large specimen had 7 main branches & 20 branchlets.

All the areoles on the younger part are long woolly
and it appears that the 20-30 areolas ^{left} horn colored
straight axillary unequal and irregular spikes
are buried in the wool and the areolas, circular
about 5 mm in diameter are about the same
distance from one another — pretty close, so that
the whole edge of the ribs seems white woolly.



When an areole is going to produce
an axillary bud, the two ~~coalesce~~
ordinary | floriferous areola — the lower semilean part bears the spines
areola — and the upper bulbous long woolly part
bearing a few spines at the upper edge produces in its
centre the bud.

In the typical *Piloservi* this seems to be the same
with the addition of an alteration in the form of the
spines and often a closer approximation of the areoles
and of the ribs themselves.

In *Melocactus* the same, with the further addition of
the isolation of the rib-arrangement into a free and
very compound phyllotactic order.

In *Opuntia* the same takes place always
as far as the same areola produces spines, & flowers



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1837 Rev. William G. Eliot Dr.
1841 2^o Admission fees 10 00
" " Semimannual taxes to date 45 00

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Cerei

Notes on Cactaceae

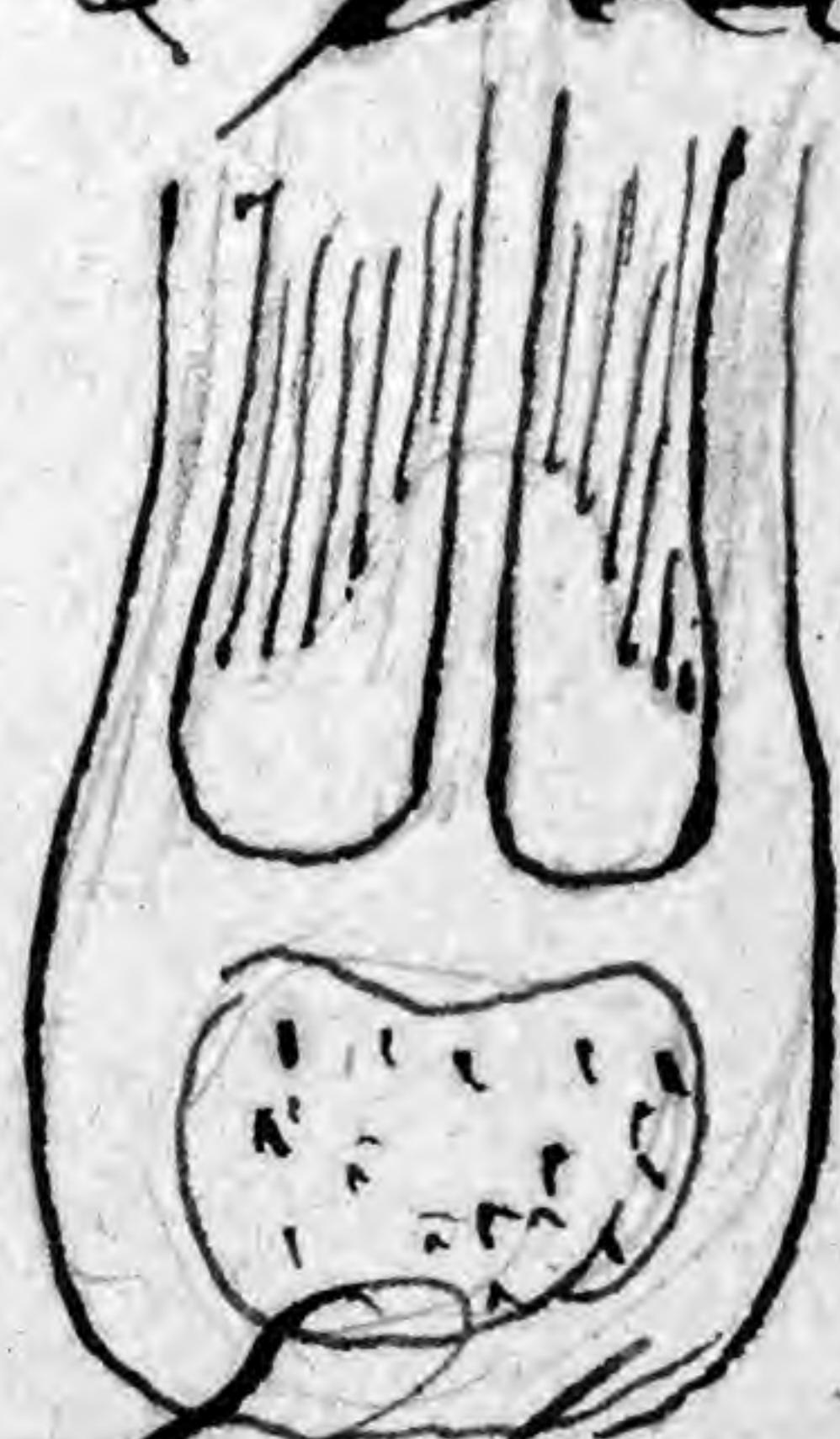
2128

Dyck Aug 1852

Pilosaceous, *Peltianus* and *P. senilis* seem so much alike that I can not distinguish them.

P. Cartizii is in flower & fruit: copy it should be a *Pilosaceous* I can not see, a little lax wool is developed on the floriferous areola — It is another proof of the impossibility to characterize this genus & to retain it. The flower is 2 inches or $2\frac{1}{2}$ long, few scales on ovary & tube, petals very numerous & short, naked space at base of tube over

over →
ovary →



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Pilosocereus castroi is very similar to *P. blos.*
nigrivirgatus - flower almost identical but
naked spine much larger, and ovary on
cavity quite depressed (constantly ??)



Cer. castroi & *Cer. nigrivirgatus*, (both *Pilosocereus* fide Schenck)
have only 1-3 scales on ovary; uppermost sepals much
larger than the short small broadly oval rounded very numerous
petals.

OVER

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Pilovercus jubaetus Salic

✓ P. vs doffs 2/4 69

In the integriflous Mass it is difficult to say whether the wool is (as in *pilosellus*) constituted also principally or entirely by a form of radial spines (transition to this in *Cebularactus piliferus* Wiegmann and others. -

2129

Pilovercus and allied Cerei may perhaps be characterized by flowers originating from a regular preformed floriferous areole and then make different sections:

The floriferous parts of plant differs from sterile (or: the tendency to propagate changes the aspect of the plant, or: a change - the appearance of the parts precedes sexual propagation) and remains so after fruitification. *Piloverci var.*

a regular persistent capsule

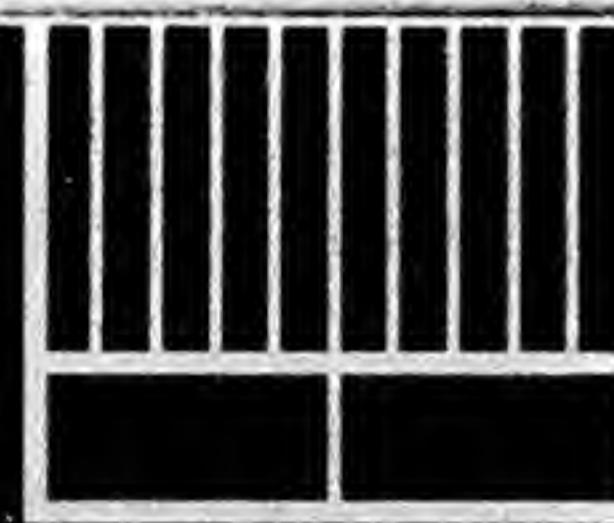
x terminal

xx lateral

b irregular, persistent on more or less deciduous bunches of wool surround flowers (over floriferous areoles)

Flowers of a & b short, tubular-inflated, limb exceeding on one round, received off flavescent, i thickening small

Ovary & fil only - scales Val most naked - axil (lateral) or with tufts of wool (sealid) or with abundance of short wool, which covers the



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waxy C. aigyr or scales larger, with abundant
area of long & loose wool (Hoppsteadii).

II floriferous not distinct from sterile parts
of plant (*Peltocerei cereiformes*)
various *C. edulis* - perhaps *C. gigantea* etc.
perhaps all or most large Cere?



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Hart Herbarium, Paris 2/4/60

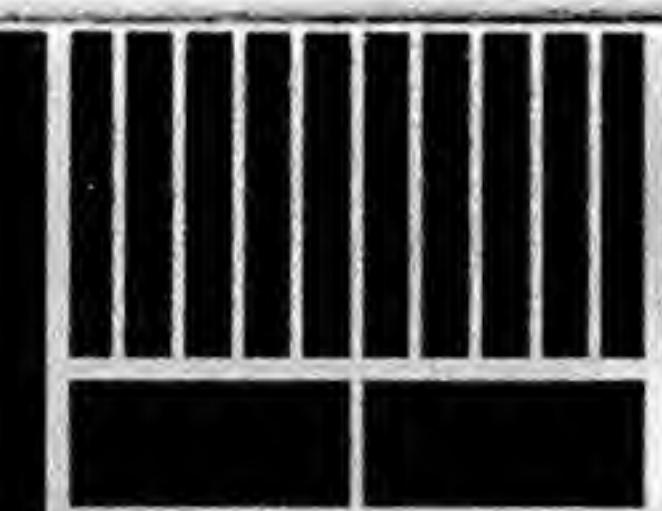
Pilocereus Houletianus well broken lateral
here and there, more rounded on top, it does
not seem as if the spines themselves or the ribs
were altered in any way. Flowers and
perf. fine here

"Pilocereus Dorotheae" Weber was a young
original plant, brought home by Weber; new spines
yellow; new wool comes out from old areole
when they are going to bloom, or whether right
above them [= areole of Echinocactus or still
better of Mammillaria - the axil ??]

Is there a type of Cerei with regularly
formed floriferous areoles — to which
P. Cerei may belong, and all of which
may bloom surrounded by a tremendous
or Conger or shorter wool? That woolly
base of my flower of C. edulis may be
just this very thing!

Pilocereus possulatus two feet high. ribs very
marked tuberculated, long oval or oblong
areoles of radial ^{and} central spine with long
edge of areole covered with long capillary or
silky bristles ^{3" long & more} which apparently constitute all the
wool there is — or is the flowering plant
more woolly and different? Compare P. senilis
here also the not flowering areoles bear
these bristly hairs.

I remark that on areoles several (4-5)
years old new spines and new silky bristles make their
appearance just above the old ones!



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